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10/815,539

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Priya Rajagopal

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EXAMINER

KANE, CORDELIA P

ART UNIT

PAPER NUMBER

2432

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/815,539 | Applicant(s) RAJAGOPAL ET AL. | |
| | Examiner CORDELIA KANE | Art Unit 2432 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-13, 15-22, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 15-22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 10, 2009 has been entered.

Response to Arguments

2. Applicant's arguments filed March 10, 2009 have been fully considered but they are not persuasive. Applicant argues that Coss fails to teach or suggest saving data for use in a later executed rule. While Coss does state that the rule processing is bypassed (column 5, lines 42-45), the applicant is misinterpreting the use of the word bypass. Coss specifically states that after caching results for a specific packet of a given network session so that when subsequent packets from the same network session arrive at the firewall the results from the previous packet are used (column 5, lines 45-50). Therefore for that subsequent packet the rule set is applied. The condition is analyzed when it is determined that the subsequent packet is from the same network flow, and then the action is completed when the previous results are used. Since the condition is met and then the action executed, the rule set is being executed.

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3. Applicant goes on to argue that Coss teaches away from applicant's claimed invention. As explained above Coss teaches what is claimed by applicant. Also, it is noted that it is unclear in the specification how else the saved results would be used in a later executed rule.

4. In response to applicant's argument that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

5. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Claim Objections

6. Claim 7 is objected to because of the following informalities: Claim 7 depends from claim 6, which has been cancelled. For purposes of examination it is assumed that claim 7 is intended to depend from claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 9 – 13, and 15 – 17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. While the claims are directed towards a system, there is no actual hardware in the body of the claim and is therefore software per se. In addition in paragraph [0017] of applicants specification the invention is defined to include a software system.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1 – 5, 7 – 13, 15 – 22, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coss in view of Moir's US Publication 2002/0120720 A1 in view of Venkatachary, and further in view of Katz.

11. Referring to claims 1, 9, and 18, Coss discloses:

- a. Receiving state rules (column 4, lines 4-6).
- b. Forming a set of rules including at least one condition and one action (column 4, lines 30-34).
- c. Storing a set of rules in tabular form(column 4, lines 5-6).
- d. Receiving a network flow including a plurality of packets (column 6, lines 29-30, Figure 5, element 501).

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e. Applying the state rules to the plurality of packets in the network flow (column 6, lines 18-21).

f. Wherein the at least one action comprises instantiation of a rule for the network flow from the set of rules (column 4, line 48) and further wherein the at least one action comprises saving the result of the at least one action for use in a later executed rule (column 5, lines 40-42).

12. Coss does not explicitly disclose expressing rules in a text format and converting them into a binary format. However, Moir discloses receiving the rule file in text format and converting it into a binary format (page 6, paragraph 72). Coss and Moir are analogous art because they are from the same field of endeavor, rules. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Coss and Moir before him or her, to modify the system of Coss to include the text to binary of Moir. The suggestion/motivation for doing so would have been so that the rules may be supported by the virtual machine (page 5, paragraph 58).

13. Coss in view of Moir does not explicitly disclose there being a database of filters, where a specific filter is selected. However Venkatachary discloses a database of filters or rules (column 8, lines 16-17) and selecting a filter (column 8, lines 56-57). Coss in view of Moir and Venkatachary are analogous art because they are from the same field of endeavor, filtering. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Coss in view of Moir and Venkatachary before him or her, to modify the method of Coss in view of Moir to include the database

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of filters of Venkatachary. The motivation for doing so would have been to provide traffic sensitive routing (column 2, lines 21-22).

14. Coss in view of Moir in view of Venkatachary does not explicitly disclose passing the definitions as a state machine. However, Katz discloses that state machines are critical for realizing the control and decision making logic in digital systems (page 383, 2nd paragraph). Katz and Coss in view of Moir in view of Venkatachary are analogous art because they are from the same field of endeavor, digital systems. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Coss in view of Moir in view of Venkatachary and Katz before him or her, to modify Coss in view of Moir in view of Venkatachary to include the state machine of Katz. The motivation for doing so would have been that state machines are critical for realizing the control and decision making logic in digital systems (page 383, 2nd paragraph).

15. Referring to claims 2, 3, 10, 11, 19 and 20, Venkatachary teaches analyzing the application layer context (column 5, lines 60-62).

16. Referring to claims 4, 12, and 21, Coss teaches wherein the filter comprises a dynamic filter (column 8, lines 27-30).

17. Referring to claims 5, 13, 22, Coss teaches wherein the filter comprises a static filter (Figure 3). Static rules are defined in applicant's specification as a rule that applies to aggregate flows. In Figure 3, all flows from A to B of type FTP are Passed.

18. Referring to claim 7, Katz teaches that the state is maintained based on the state table (page 385). Coss teaches maintaining a state table of saved results (column 5,

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lines 38-55). Therefor Coss in view of Katz teaches maintaining an expected state utilizing the saved results.

19. Referring to claims 8, 16, and 25, Coss teaches activating a rule (column 8, lines 13-15).

20. Referring to claims 15, and 24, Coss teaches deactivating a rule (column 8, lines 36-38).

21. Referring to claim 17, Coss teaches maintaining a state table for the network flow (column 5, lines 38-55).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CORDELIA KANE whose telephone number is (571)272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. K./
Examiner, Art Unit 2432

/Gilberto Barron Jr./
Supervisory Patent Examiner, Art Unit 2432